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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/768,303

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Ozgur C. Leonard

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EXAMINER

WAI, ERIC CHARLES

ART UNIT

PAPER NUMBER

2195

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/768,303	<b>Applicant(s)</b> LEONARD ET AL.	
	<b>Examiner</b> ERIC C. WAI	<b>Art Unit</b> 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/23, 8/4, 9/8/08</u> .                                       | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-33 are presented for examination.

#### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 23-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 23-33 recite an “apparatus” and a “mechanism”; however, it appears that the apparatus and mechanism would reasonably be interpreted by one of ordinary skill in the art as software, per se, failing to be tangibly embodied or include any recited hardware as part of the system. Mechanisms consisting of software alone are known to exist (i.e. software processors). Applicant is advised to amend the claims by including a computer processor and memory.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2195

5. Claims 1-33 rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al. (US PG Pub No. US 2003/0014466 A1) in view of Armstrong et al. (US PG Pub No. US 2002/0156824 A1).

6. Armstrong was disclosed in IDS dated 9/29/2005. Berger was disclosed in IDS dated 04/23/2008.

7. Regarding claim 1, Berger teaches a machine-implemented method, comprising:  
establishing a plurality of non-global operating system partitions within a global operating system environment provided by the operating system, wherein each non-global operating system partition serves to isolate processes running within that non-global operating system partition from other non-global operating system partitions within the global operating system environment, wherein enforcement of boundaries between the non-global operating system partitions is carried out by the operating system, and wherein the plurality of non-global operating system partitions comprises a particular non-global operating system partition ([0035] lines 9-14, wherein an operating system sets up logically protected computing environments or compartments);

ensuring that processes running within the particular non-global operating system partition are allowed to utilize only the resources assigned to that partition ([0035] lines 20-22).

8. Berger does not explicitly teach associating the particular non-global operating system partition with a first resource pool comprising one or more resources. Armstrong teaches the use of processor resource pools in logically partitioned system ([0011-

Art Unit: 2195

0012])). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Berger to include processor resource pools. Since Berger only discloses methods to assign network resources, one would be motivated by the desire to include a way of assigning each compartment in Berger to a processor resource pool.

9. Regarding claim 2, Armstrong teaches that the first resource pool comprises one or more processors ([0012]).

10. Regarding claim 3, Armstrong teaches that ensuring comprises: assigning work from processes running within the particular non-global operating system partition to only the one or more processors in the first resource pool ([0011], wherein each logical partition is constrained to execute in an assigned processor set).

11. Regarding claim 4, Armstrong teaches that the first resource pool comprises an indication of a maximum amount of memory that can be consumed ([0023]).

12. Regarding claim 5, Berger and Armstrong do not explicitly teach that ensuring comprises:

receiving, from a particular process running within the particular non-global operating system partition, a memory allocation request; determining whether granting the memory allocation request would cause the maximum amount of memory that can be consumed to be exceeded; and in response to a determination that granting the

Art Unit: 2195

memory allocation request would not cause the maximum amount of memory that can be consumed to be exceeded, granting the memory allocation request.

13. However, it is old and well known that operating system manage memory allocation requests and grant them accordingly. It would have been obvious to one of ordinary skill in the art to modify Berger and Armstrong to explicitly teach memory management.

14. Regarding claim 6, Berger and Armstrong do not explicitly teach ensuring further comprises: in response to a determination that granting the memory allocation request would cause the maximum amount of memory that can be consumed to be exceeded, deallocating sufficient memory from one or more other processes to enable the memory allocation request to be granted without causing the maximum amount of memory that can be consumed to be exceeded; and granting the memory allocation request.

15. It is old and well known that OS can reallocate resources to ensure the efficient management of resources such as when a high priority process has an urgent processing target that needs to be met. It would have been obvious to one of ordinary skill in the art at the time of the invention to deallocate sufficient memory from one or more other processes to enable the memory allocation request to be granted without causing the maximum amount of memory that can be consumed to be exceeded and granting the memory allocation request. One would be motivated by the desire to ensure that high priority requests are granted.

Art Unit: 2195

16. Regarding claim 7, Berger teaches that the operating system is executed on a computer system, and wherein the resources in the first resource pool are just a subset of a total set of resources available on the computer system ([0035] lines 20-26).

17. Regarding claim 8, Armstrong teaches that ensuring comprises: associating each process running within the particular non-global operating system partition with the first resource pool ([0011], wherein each logical partition is constrained to execute in an assigned processor set).

18. Regarding claim 9, Berger and Armstrong do not explicitly teach: receiving an indication that the particular non-global operating system partition is to be associated with a second resource pool instead of the first resource pool, wherein the second resource pool is different from the first resource pool, and wherein the second resource pool comprises one or more resources; associating the particular non-global partition with the second resource pool instead of the first resource pool; and ensuring that processes running within the particular non-global partition are allowed to utilize only the resources in the second resource pool.

19. Armstrong does teach that resources can be reallocated to partitions depending on changing needs ([0009-0010]). It would have been obvious to one of ordinary skill in the art at the time of the invention to include modifying the resource pools. One would be motivated by the desire to dynamically reallocate resources to improve system performance as indicated by Armstrong.

20. Regarding claim 10, Armstrong teaches that ensuring that processes running within the particular non-global operating system partition are allowed to utilize only the resources in the second resource pool comprises: associating each process running within the particular non-global partition with the second resource pool instead of the first resource pool ([0011], wherein each logical partition is constrained to execute in an assigned processor set).

21. Regarding claim 11, Berger and Armstrong do not explicitly teach that the operating system executes on a computer system, and wherein the method further comprises: receiving, from a particular process running within the particular non-global operating system partition, a request for information pertaining to all resources; and providing, to the particular process, information pertaining only to the one or more resources in the first resource pool, even though the computer system comprises other resources.

22. Armstrong teaches that each partition is completely separated from each other ([0034]). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide information pertaining only to the one or more resources in the first resource pool, even though the computer system comprises other resources. One would be motivated by the desire to enforce isolation of partitions as indicated by Armstrong ([0034]).



Art Unit: 2195

23. Regarding claims 12-33, they are the machine-readable medium and apparatus claims of claims 1-11 above. Therefore, they are rejected for the same reasons as claims 1-11 above.

### ***Response to Arguments***

24. Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric C. Wai whose telephone number is 571-270-1012. The examiner can normally be reached on Mon-Thurs, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng - Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2195

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/  
Supervisory Patent Examiner, Art Unit 2195

/Eric C Wai/  
Examiner, Art Unit 2195